

United States Department of the Interior  
Bureau of Land Management  
Elko, Nevada

# **Cleary Petroleum Corporation Bruffy Canyon Federal 1-14 Oil Well ENVIRONMENTAL ASSESSMENT**

August 2007



NVN-4060009, BLM/EK/PL-2007/017

**Bruffy Canyon Federal 1-14 Oil Well**  
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**Attachments**

Well Site Photos

Figures (from APD No. NV-010-07-017)

Map A – Location Map

Map B – Project Map

Plan View of Pit and Pad Layout, Drilling Rig Layout

# **Bruffy Canyon Federal 1-14 Oil Well Environmental Assessment**

**August 2007**

BLM/EK/PL-2007/017

NV-010-APD-2007-002 (NVN-078583)

## **1. INTRODUCTION**

Cleary Petroleum Corporation holds the oil and gas lease (NVN-078583) for public lands within a high potential oil and gas area in the Pine Valley, Bruffy Canyon area in Eureka County, Nevada. They submitted an application for a permit to drill (APD) a well in the leased parcel. The proposal has two phases; an exploratory phase and, if oil and gas is found, a post-drilling production phase. The surface use plan of the application is incorporated by reference.

The BLM, Elko Field Office, has prepared this environmental assessment (EA) to comply with the National Environmental Policy Act of 1969 (NEPA). This EA tiers to the environmental impact statement (EIS) for the 1987 Elko Resource Management Plan, and incorporates by reference pertinent information from a district-wide EA for oil and gas leasing that was completed in September 2005 (BLM/EK/PL-2005/030). These NEPA documents and the APD are available upon request at the BLM Nevada State Office or the Elko Field Office.

### **1.1. Purpose and Need**

The proposed action is for BLM to approve an application to explore for oil, and if successful develop an oil well under Federal lease number NVN-078583. Oil and gas is used to manufacture a wide variety of valuable products including plastic food containers, furniture, floor coverings, construction materials, pharmaceuticals, pesticides, paints, lubricating oil, fuel, paving asphalts and polymers of various kinds. Action is needed to provide for timely exploration and development of energy resources on public lands, thus reducing U.S. dependence on imported supplies. The exploration for and domestic production of oil and/or gas resources on public lands would benefit the security and welfare of the American citizens at risk from the disruption of energy supplies and drastically increased prices, and thus help meet the intent of Executive Order 133212 dated May 18, 2001, and the Energy Policy Act of 2005.

This action would facilitate energy development where appropriate. Leasing is authorized under Mineral Leasing Act of 1920, as amended and modified by subsequent legislation, and regulations found at 43 CFR part 3100. BLM authority for leasing public mineral estate for the development of energy resources, including oil and gas, is listed in 43 CFR 3160. Oil and gas leasing activities are recognized as an acceptable use of the public lands under the Federal Land Policy and Management Act of 1976 (FLPMA). BLM approval of leasing activities is subject to conditions to prevent undue or unnecessary degradation of public lands.

## **1.2 Land Use Plan Conformance**

The proposed action is in conformance with the Elko Resource Management Plan, as approved March 11, 1987. The decision for minerals (pages 3 and 39) designates the area as open to oil and gas leasing, and the plan prescribes procedures for the protection of sensitive resources. The decision record for the 2005 EA, signed September 29, 2005, identifies direction since the RMP was approved that further clarifies BLM responsibilities for the protection of natural and cultural resources from undue degradation due to leasing activities. Stipulations that may be applied as a condition of approving lease activities are in Appendix B to the 2005 EA.

This action is further consistent with other federal, state and local plans, policies and programs to the maximum extent possible. This includes federal policies for the Energy Act of 2005, National Historic Preservation Act, Endangered Species Act and Clean Water Act, and state plans for the conservation of sensitive wildlife species.

## **2. ALTERNATIVES**

### **2.1 Proposed Action**

Cleary Petroleum Corporation proposes to drill an exploration well on public land within a wild cat area as shown on the attached general location map from the APD (Map A). The surface use plan for this well (Bruffy Canyon Fed. 1-14) has two phases; a drilling phase and post drilling production phase. Drilling would be done in order to determine if oil and/or gas resources do indeed exist at the site. If economic oil and/or gas resources are not encountered, the site would be reclaimed as soon as possible.

In the event that economic quantities of oil are encountered at the location, the well and production facilities would be constructed. This would include a well head with valves and choke, separator, vertical emulsion treater, fiberglass salt water tanks, welded steel oil tanks, natural gas meter along with associated pipe and fittings. If successful oil would be transported by tanker trucks over the new and existing access road to State Highway 228, and then other highways to the refineries in Railroad Valley Nevada.

The planned access road will be approximately 1720' in length. Approximately 1600' of road will follow an existing road bed originally used to access the True Oil Company Federal 14-1, an abandoned drill site located 1000' west of the proposed drill site, as shown on Map B. The location of the exploration well and on-lease road is legally described as:

T. 27 N., R. 52 E  
E 1/2 SW 1/4, Section 14  
Mount Diablo Meridian

Operations were proposed to begin by early August of 2007 in the APD. Pad and sump construction then drilling will commence as soon after approval as equipment is available. Drilling and construction operations would continue for approximately 30 to 60 days. If oil is found, production could last from between one month to 50 years depending upon the resource available. Following depletion of the oil and gas resources, the site would be reclaimed.

Approximately 14 employees would be required for drilling operations. In the event production is established, four other workers would be needed for construction and pumping operations. None of these employees would be new to the area because they are already employed on drill rigs currently operating in northeastern Nevada.

A detailed description of the components of the Proposed Action is as follows:

### **Road Access**

As shown on the site Map B, access to the site would leave the county road and follow about 1,600 feet of an existing road that would be upgraded, and the project would include the construction of 120 feet of new road to the well site for a combined total of 1,720 feet of new and upgraded road. Total disturbance for the access road would be about 1.18 acres. The portion of the new road in T. 28 N., R. 56 E, NW1/4 NE1/4 Section 17 would be in the leased parcel (on-lease). The road would be constructed to a maximum width of 40 feet with an 18 feet wide running surface, crowned, ditched and graveled.

The new and existing access road would be constructed to withstand the anticipated loads. Water control structures would be constructed as necessary. Approximately 1300 cubic yards of gravel would be obtained from the Pine Valley Community Pit (N-47167). The location of the gravel pit is legally described as:

T. 27 N., R. 52 E  
SE1/4NE1/4NW1/4 Section 11  
Mount Diablo Meridian

### **Drill Pad**

The drill pad would be constructed with the layout shown in the APD, Appendix A. About 1.25 acres would be disturbed. The drill pad would cover an area 175' by 250' and would include a 100' by 100' reserve pit within the pad. All available topsoil would be stripped from the pad area and stockpiled for use upon final reclamation. A suitable liner, such as bentonite, would be installed in the reserve pit to prevent contamination of the groundwater. Drilling and construction operations would continue for approximately 30 to 60 days.

All drilling and support equipment would be contained within the drill pad. This equipment would include two bedroom rig house (trailer) to house the workers and provide working areas. The drill rig would be located next to the reserve pit and would be surrounded by support equipment including a fuel tank, boiler, light plant, parts shed, mud tanks, water tank, driller shack and pipe tubs or rack.

Pressure control equipment would include a casing head with a minimum working pressure of 3000 psi will be welded on top of the surface casing. Eleven inch ram blowout preventors will be mounted on top of the casing head along with a Reagan type annular blow out preventor will be mounted on top on top of the double ram blow out preventors. In addition a rotating head will be installed with rotating head rubber readily available if needed. All well control equipment will have a minimum pressure rating of 3,000 psi.

In the event pressure is encountered while drilling, fluid can be diverted via a high pressure line from the casing head to a choke manifold. A choke manifold will consist of multiple valves and adjustable chokes to allow free flow to be controlled at all times.

All well control equipment will be tested to the lesser of maximum working pressure of the system if a test plug is utilized, or to a pressure equal to 75% of rated burst pressure of the casing string. An initial test will be conducted prior to drilling new formation rock below the casing string by a certified tester.

Three sides of the reserve pit would be fenced during drilling operations. Prior to rig release, the fourth side would be fenced to prevent livestock and wildlife from becoming entrapped.

Prior to any hydrocarbon testing, test tanks would be on location. Any oil or hazardous material that is discharged to the reserve pit during an emergency situation would be removed and disposed of in compliance with Notice To Lessees (NTL-2B) in a certified injection well or other certified disposal site.

Areas of the drill pad not required for production would be reclaimed. The total area needed for production would not be greater than the drilling pad of 250 ft. long and 175 ft. wide. If oil production is established, the production rate may be a few hundred to two thousand barrels of oil per day. This would necessitate up to eight tractor-trailer tanker loads per day to transport the oil to the refinery Railroad Valley, Nevada. If natural gas is encountered, the well would likely be shut-in as there are no natural gas pipelines within 36 miles which could be used to transport the gas.

### **Water Supply**

A tentative arrangement has been reached with a nearby ranch, to drill a water well to supply the water required for drilling and completion operations. Water will be transferred via temporary polyethylene lines from water well to the location. These lines will run immediately adjacent to the access road within the 30' right-of-way. Supplemental water if required will be hauled by a licensed trucking company. The operator would obtain a temporary permit from the Nevada State Engineer if necessary.

### **Construction Materials**

All construction material for the proposed location and access road will be of native borrow and soil accumulated during the construction of the location. The Pine Valley Community Pit (N-47167, file closed) 1.5 miles north of the Bruffey Ranch and ½ mile northwest of the project location would be a source of surfacing material.

### **Waste Material and Disposal**

A conventional reserve pit system is proposed in drilling of the well. Materials to be stored in the reserve pit are restricted to drill cuttings, excess drilling mud, and fresh water. An impermeable liner will be installed in the reserve pit to prevent seepage of liquid contents into the soil or subsurface aquifer.

A portable toilet will be located on site for human waste during all construction, drilling and completion operations. Disposal of the waste will be accomplished off site by hauling the contents to an approved disposal site.

Trash and other solid waste will be contained in an appropriate receptacle on location. The receptacle will be constructed and positioned to prevent the contents from being carried off location by wind or wildlife. Burning of trash and debris will not be allowed.

All chemicals will be disposed of appropriately at an approved disposal site. Drip pans and/or absorbent pads will be used to prevent the escape of oil or lubricants. Used motor oil will be recovered and recycled by the responsible party.

Produced water will neither be allowed to escape onto the surface, nor stored in the reserve pit. All produced water will be stored in tanks to minimize the environmental impact.

### **Reclamation**

In the event that the well is not successful and production cannot be established, backfilling, leveling and re-contouring would be done after the reserve pit has dried. The topsoil stockpile would then be spread over the disturbed area to a uniform thickness. The pad area along with the access road would be ripped on the contour at least one and one-half feet deep with rips spaced no more than one and one-half feet apart. Rehabilitation activities would be restricted to the pad and roadbed of the access route so as to prevent damage to cultural resources. Revegetation on the disturbed areas would be accomplished by broadcast-seeding and covering the following pure live seed (PLS) mixture, as proposed in the APD and approved by BLM. A portion of the topsoil stockpile would be used to cover the seed approximately ¼ to 3/8 of an inch in depth.

**Table A. Reclamation Seed Mix**

<u>Species</u>	<u>Pounds PLS per Acre</u>
Mountain Home Sandberg's bluegrass	1.5
Hycrest Crested Wheatgrass	2
Bannock Thickspike Wheatgrass	2
Intermediate Wheatgrass	2
Basin Wildrye	2
Fourwing Saltbush	2
Western yarrow	0.15

If production is established the pump jack would be painted shale green (Munsell Soil Color No. 5Y 4/2) and all remaining areas of the drill pad not needed for production facilities would be reshaped to the contour of the natural surrounding terrain. The remaining topsoil would be spread over the reshaped area to a uniform thickness and reclaimed in the same manner as the reserve pit.

After the oil is depleted, the production facilities would be removed and the remaining disturbed area would be reclaimed in the same manner as described above. The existing access road would be maintained in as good or better condition as it was before operations started.

### **Workforce**

The temporary drilling workforce would consist of 14 individuals including the drilling engineer, mud engineer, tool pusher, driller, geologist, two mud loggers, and four helpers. The drilling workforce would be on site for a period of 15 to 30 days.

If the well is completed, a construction crew of three would be on site for a period of 45 to 60 days. If production is established, a part-time pumper would oversee day to day operations for the life of the well.

### **Monitoring**

At least three inspections would be done by BLM personnel to monitor the operations. The first would be done during the pre-drill meeting before any disturbance occurs, one inspection would be done while the drill rig is on location and one inspection following reclamation of the site.

### **2.2 No Action Alternative**

Under this alternative, drilling would not be allowed at this location. If the operator still wanted to explore this site, he would be required to directionally drill from some alternate location. Directional drilling adds additional costs to drilling which are double that of conventional drilling and as such, may make the entire operation uneconomic. If this alternative were implemented, the operator might choose abandon the project.

### **2.3 Alternatives Considered but Eliminated from Analysis**

Alternate sources of gravel were considered. Distance, quality of material, location in relation to sage grouse leks and disturbance of previously undisturbed areas were the factors used to eliminate the alternate sources.

## **3. AFFECTED ENVIRONMENT/EFFECTS**

### **General Setting**

The project area is in Pine Valley, about 32 miles south of the city of Carlin, Nevada, on fan piedmont remnants and low hills, with elevations around 5700 feet. Annual precipitation is about 9 inches. The project would disturb 2-3 acres, including construction of an access road to the well site the well pad and the removal of material from the gravel pit. This area is characterized as a sparsely populated agricultural area, and the dominant use of public lands is for livestock grazing. The closest ranch buildings or corrals are located about one mile from the project. The area is within a fenced and seeded rangeland treatment area 1950-60 in the Bruffy grazing allotment. Big sagebrush, rubber rabbitbrush, crested wheatgrass and Great Basin wildrye are the dominant plants. There are Utah juniper trees on or near the proposed access road, and adjacent to the proposed drill site.



### **3.1 Critical Elements Not Affected.**

The following critical elements of the human environment are not present or are not affected by the proposed action as described in this EA.

#### **Areas of Critical Environmental Concern (ACEC)**

##### **Cultural Resources**

##### **Floodplains**

##### **Prime or Unique Farmlands**

##### **Hazardous/Solid Wastes**

##### **Wild and Scenic Rivers**

##### **Wilderness**

The project is not within any unique geographic area, including any ACEC, wilderness or wilderness study area, wild or scenic river or crucial wildlife habitat. No construction in a floodplain is proposed. A Class III cultural resources inventory was completed for the proposed oil well pad in April, 2007 by D. L. Zerga & Associates (report BLM1-2585(N)). No cultural resources were found during the inventory. A copy of the negative report was sent to the Nevada State Historic Preservation Office for incorporation into the Statewide Inventory per the stipulations outlined in the Programmatic Agreement between the SHPO's office and the BLM. In a letter dated May 24, 2007, the Nevada SHPO acknowledged receipt of the negative report. Elko Field Office cultural staff and the Native American Coordinator reviewed the proposed action with tribal members. No cultural/Tribal resources or sites were identified. The APD includes plans for management, containment and disposal of hazardous and solid wastes in accordance with federal and state permitting requirements.

### **3.2 Resources Affected**

The proposed action would disturb 2-3 acres, including construction of an access road to the well site the well pad and the removal of material from the gravel pit. Resources/uses that are present and may be affected by the proposed action are discussed in the following subsections. They include land use (grazing, mineral materials), air quality, Native American religious concerns, water quality, soils, wetlands/riparian areas, wildlife (including special status species), migratory birds, visual resources, and vegetation (including noxious weeds).

#### **3.2.1 Land Use**

This area is used for grazing cattle. The proposed well site is within the Bruffey Allotment, and the area is grazed under an early season (spring) grazing prescription.

Past fluid minerals exploration activity in this area includes the True Oil Company Bird Federal 14-1 well (abandoned) approximately 1,000' to the west.

Gravel to be used as surfacing material for the existing access road and construction of a new road to the well site would be transported from the existing Pine Valley Community Pit (N-47167, file closed) 1.5 miles north of the Bruffey Ranch and ½ mile northwest of the project location would be a source of surfacing material.

NE1/4 SE1/4 Section 11 T.27 N., R. 52 E. MDM. This material site is a BLM gravel pit which was established for use by Pine Valley residents in the 1980s.

### **Effects**

The fence around the reserve pit during and after operations would preclude cattle from entering the reserve pit and would eliminate any danger to cattle. Road construction and drilling activities are not expected to conflict with grazing use of the area. The access road would include installation of a cattle guard, and construction of the well site is scheduled to occur outside of the grazing season.

There would be a loss of forage production over a 1.25 acre drill pad area until the site is reclaimed at the end of the project. Total disturbance from the new access road would be 0.6 acres.

The gravel pit disturbance would be within the existing gravel pit disturbed area. Combined disturbance from all oil well and access roads and gravel pit would be 2-3 acres.

### **3.2.2 Air Quality**

The project area is located in an unclassified air basin. Air quality is generally good and thus considered to be in attainment of National Ambient Air Quality Standards. There are localized occurrences of fugitive dust by high winds, vehicular traffic, and construction, but these activities have not resulted in violation of air quality standards for any criteria pollutants. The nearest classified area is the Class I Jarbidge Wilderness Area.

### **Effects**

Project activities such as vehicular travel, blading and other ground disturbing activity would increase fugitive dust during construction and operation of the facility. Emissions would likely continue until the site is reclaimed. The Class I airshed would not be impacted by this construction.

### **3.2.3 Native American Religious Concerns**

Various tribes and bands of the Western Shoshone have stated that federal projects and land actions can have widespread effects to their culture and religion as they consider the landscape as sacred and as a provider. The proposed well site is located within the traditional territory of the Western Shoshone.

Tribal participants of the South Fork Band of Western Shoshone reviewed and are aware of the proposed action and location. A tour of the project site was proposed by the BLM. The Tribe declined the offer.

### **Effects**

Based on informal discussion with tribal members and considering the description and location of the project, BLM has determined that this activity will not adversely affect any Native American religious site or religious practice or ceremony. Thus the initiation of formal Native American consultation has been deemed unnecessary for the exploration well site.

The project is not within a known Traditional Cultural Property (such as the Tosawihi Quarries, etc.). Existing ethnographic information does not suggest that Native American traditional, spiritual and/or cultural activities took place or continue to take place at or near the project site. Project activities are not widespread and are limited to a relatively small area. Surface disturbance is limited to 13 acres. Access to any unknown (to BLM) tribal activity areas will remain open. Archaeological surveys have not revealed evidence of substantial past tribal use. The existence of a Tribal Traditional Cultural Property or traditional/spiritual/cultural activities is unlikely.

### **3.2.4 Water Quality (Surface/Ground)**

Water resources in the project area include perennial and intermittent streams, springs, and groundwater. There are several springs close to the project area, the nearest of which is about 1/4 mile from the drill pad. An unnamed intermittent tributary to Pine Creek is approximately 400 yards northeast of drill site. This stream only flows during spring snowmelt and extreme rainfall events. The stream joins Pine Creek 4 1/4 miles from the project site. Vegetation in the area surrounding Pine Creek includes a mixture of forbs, grasses, sedges and rushes.

### **Effects**

Impacts to water quality would not be expected as a result of the proposed action. In general, ground disturbing activities and facility operation lead to increased surface runoff, erosion, and possible discharge of sediment downstream. With respect to the proposed action, increased sediment discharge into the Pine Creek area could occur during extreme weather events. Implementation of Best Management Practices would decrease or eliminate impacts from the project. In addition, the well developed riparian zone along watered portions of the Pine Creek drainage would aid in the sediment filtering process decreasing sediment discharge to Pine Creek.

The Energy Act of 2005 amended sections of the Clean Water Act to exempt oil and gas exploration and development activities from requirements for a National Pollution Discharge Elimination System (NPDES) permit<sup>1</sup>.

Best Management Practices would also reduce the likelihood of impacts to groundwater. Proper casing of the well would protect against mixing of aquifers or drawdown of aquifers. The reserve pit would be lined with bentonite to prevent contamination of the water table. If the well is successful and oil is produced, containment berms constructed around the storage tanks and oil loading areas would contain any spills.

### **3.2.5 Soils**

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<sup>1</sup> The Energy Policy Act of 2005 amended Section 502 of the Clean Water Act by changing the definition of oil and gas exploration and production to encompass field activities, and Section 402(l)(2) of the CWA to exempt certain entities from a requirement to obtain National Pollution Discharge Elimination Permits (NPDES) storm water permits, except in very limited circumstances. The Environmental Protection Agency published a final rule in the Federal Register consistent with the amendments on June 12, 2006.

The soil mapping unit in the project area is the Cortez-Tenvorrd association. Soils in this association formed on fan piedmonts in loess, mixed alluvium and volcanic ash. Surface texture is silt loam and depth is shallow over an indurated hardpan. Hazard of erosion by water is moderate and hazard of erosion by wind is slight.

### **Effects**

A total of 2-3 acres would be disturbed under the proposed action. Consequences of the proposed activity would be the destruction of soil structure, mixing of soil horizons which could cause an increase or decrease in productivity after reclamation, and increased wind and water erosion hazard when vegetation is disturbed. The drill site would have accelerated runoff from the site due to the compacted soils. Implementation of Best Management Practices would minimize soil lost from the site. If the drill site were found unproductive, the site and the road would be reclaimed and erosion potential would decrease once vegetation is established.

### **3.2.6 Wetlands and Riparian Areas**

Wetlands and riparian areas are abundant near the project area as a result of numerous springs, seeps, and perennial streams. Riparian area nearest to the project area is located about ¼ mile northeast of the drill pad. The area is characterized by interrupted flows and mixtures of grasses, forbs, sedges and rushes. Dominant species include baltic rush (*Juncus balticus*), Nebraska sedge (*Carex nebrascensis*), redbud (*Agrostis* spp.), cinquefoil (*Potentilla gracilis*), Kentucky bluegrass (*Poa pratensis*) and common dandelion (*Taraxacum officinale*). The drainage also supports scattered willow (*Salix* spp.). Riparian habitat conditions are good as a result of an early season grazing prescription that tends to favor growth and establishment of riparian plant species.

### **Effects**

Although wetlands and riparian zones are not directly affected; potential exists for increased runoff and sediment delivery to Pine Creek via an intermittent drainage which intercepts the project site. The potentially affected portions of Pearl Creek contain riparian vegetation that is capable of withstanding high flow events. As a result, increased discharge of water and sediment is not expected to create a gully in the riparian area, but may accumulate sediment potentially causing it to decrease in size.

### **3.2.7 Terrestrial Wildlife**

The proposed drill site provides habitat characterized by the Wyoming big sagebrush vegetation type and a Loamy 8-10" Precipitation Zone ecological site. The area is within a fenced grazing allotment pasture that was plowed and seeded in the past (1950 -1960s era) with crested wheatgrass, an exotic perennial grass that is still the dominant herbaceous species on the site. Utah juniper stands provide habitat within less than 150 yards from the drill site and along portions of the proposed access road to the drill site.

Sagebrush vegetation types provide habitat for approximately 100 bird species, 70 mammal species, and several reptile and amphibian species. Additional species are also found in the vicinity of Utah juniper woodlands habitat on a seasonal or yearlong basis. Over a dozen springs with associated riparian/meadow habitat occur on public and private lands within an approximate

0.3-mile to 0.5-mile distance from the site. Many wildlife species that primarily inhabit riparian and meadow habitat on intermittent to perennial flows associated with these areas could also utilize the uplands on the drill site. Some of the species are in the “Migratory Birds by Habitat Type” list from the 1999 Nevada Partners in Flight Bird Conservation Plan.

Mule deer, pronghorn antelope, sage grouse and raptors are emphasized in the 1987 Elko Resource Management Plan. Leasing activities are subject to seasonal restrictions to protect crucial deer winter range, antelope yearlong habitat and sage grouse brood-rearing areas (1987 Record of Decision, page 37). As a standard operating procedure, activities may also be limited to protect active nests of sensitive raptor species. Sensitive sage grouse and raptors are discussed in the next section on Special Status Species.

The area has no special designation as “crucial” habitat for mule deer as of summer 2007 although crucial winter range has been designated higher in elevation in the Sulphur Springs Range. Some dispersed mule deer movements could occur on a yearlong basis and primarily during the summer period. These movements would occur from pockets of Utah juniper at lower elevations on public lands to private native hay meadows and riparian areas associated with two private ranches to the north and south.

The area has no special designation as “crucial” habitat for pronghorn as of summer 2007. Some limited pronghorn use could occur as this species continues to expand its range into suitable habitat on the Elko District. The Nevada Department of Wildlife (NDOW) has identified the area as antelope yearlong range. Pronghorn have recently been observed by BLM and NDOW personnel approximately one to four miles to the south on the Mineral Hill Allotment.

### **Effects**

If a drill rig is not available until August as the earliest and drilling is completed before January, then proposed action would not occur during of the birthing/nesting period and young-rearing period for essentially all wildlife species. Most highly mobile wildlife species would likely avoid the drill site while operations are in progress. Less mobile mammalian and reptilian species would likely be temporarily displaced. In some instances, less mobile wildlife species that use burrows (such as pygmy rabbits, as discussed in the next section on sensitive species) could be crushed by exploration equipment.

The destruction of nestlings would be avoided if the construction activities occur outside of the avian breeding season. Soil disturbance and compaction could destroy animal burrows, injure or kill less mobile animals, or trap animals in deep burrows. Activities associated with the proposed exploration may be sufficient to cause mammals, birds, and reptiles to avoid use of suitable habitat in the project area. Wildlife could tend to avoid active drill sites and roads and could move to adjacent habitat which would increase population in those areas. However, most habitat areas are likely at their respective carrying capacities for given species so animals could be lost from given populations. Depending on variables such as species, behavior, density, and habitat, adjacent populations may experience increased mortality, decreased reproductive rates, or other adverse responses. Species most likely to be affected are small mammals, reptiles, and passerine birds. If no oil production or temporary oil production occurs and reclamation efforts are successful, the reclaimed area would provide forage diversity and new foraging areas for

both non-game and game species, and in the case of predatory species, their prey. Nesting habitat for birds that nest directly in shrub cover, or those that nest on the ground within shrub cover, could be impacted until re-establishment of shrub species occurs following reclamation. Pronghorn and mule deer could potentially benefit from the forage diversity and “food plot” setting that the reclaimed area would provide if reclamation efforts are successful. If reclamation efforts are unsuccessful and the area is invaded by noxious or annual exotic vegetation, there could be a loss of perennial vegetation needed as a habitat component for many wildlife species. If more permanent development occurs, there would be a long-term loss of yearlong pronghorn range associated with the proposed action and avoidance of an undetermined area around the proposed action. However, the proposed action area, including roads and well site (2.75 acres), is approximately two to three acres and would later be reclaimed if drilling efforts are unsuccessful. If more permanent development occurs, there would be a long-term loss of habitat associated with the proposed action and possible avoidance of an undetermined area around the sites when workers are in the area or active use of equipment/machinery occurs. Some wildlife species would habituate to the structures and people that are active on site and continue to utilize habitat either on, or relatively close to, the site.

### **3.2.8 Special Status Species**

BLM policy (516 DM 6840) defines special status species to include:

- Federally Threatened or Endangered Species: Any species that the U.S. Fish and Wildlife Service has listed as an endangered or threatened species under the Endangered Species Act throughout all or a significant portion of its range.
- Proposed Threatened or Endangered Species: Any species that the Fish and Wildlife Service has proposed for listing as a federally endangered or threatened species under the Endangered Species Act.
- Candidate Species: Plant and animal taxa that are under consideration for possible listing as threatened or endangered under the Endangered Species Act.
- BLM Sensitive Species: Species 1) that are currently under status review by the U.S. Fish and Wildlife Service, 2) whose numbers are declining so rapidly that Federal listing may become necessary; 3) with typically small and widely dispersed populations; or 4) that inhabit ecological refugia or other specialized or unique habitats.
- State of Nevada Listed Species: State-protected animals that have been determined to meet BLM’s Manual 6840 policy definition.

Actions that may affect species that are federally listed, or are proposed for listing, as threatened or endangered are subject to consultation or conference under Section 7 of the ESA. Nevada BLM policy is to provide State of Nevada Listed Species and Nevada BLM Sensitive Species with the same level of protection as is provided for candidate species in BLM Manual 6840.06C. Nevada protected animals that meet BLM’s 6840 policy definition are those species of animals occurring on BLM-managed lands in Nevada that are: (1) ‘protected’ under authority of Nevada Administrative Codes 501.100 – 503.104; (2) have been determined to meet BLM’s policy definition of “listing by a State in a category implying potential endangerment or extinction,” and (3) are not already included as a federally listed, proposed, or candidate species.

### **Federally Listed, Proposed and Candidate Species**

**Table B1** lists the species that are listed, have been proposed for listing, or have been petitioned for listing as threatened or endangered.

**Table B1. FEDERALLY LISTED AND CANDIDATE SPECIES**  
Proposed Bruffey Canyon #1-14 Project

COMMON NAME	SCIENTIFIC NAME
Federally Endangered Species	
California Condor*	<i>Gymnogyps californianus</i>
Federally Threatened Species	
None	None
Federally Proposed Threatened or Endangered Species	
None	None
Federal Candidate Species	
(Yellow-billed Cuckoo)*	<i>Coccyzus americanus occidentalis</i>
Nevada BLM Sensitive Bird Species	

There have been no known site records for the California condor on the BLM Elko District.

The Yellow-Billed Cuckoos – This candidate is a riparian obligate species and willow cover is needed as a habitat component. Willow cover is absent in the project area.

No critical habitat for any aquatic or terrestrial species has been designated or proposed for designation under the Endangered Species Act in the Elko District.

#### Effects on Federally Listed and Candidate Species

BLM has determined the proposed action has no potential to affect any listed or candidate species or their habitat.

#### **Sensitive Mammals**

Table B2 lists the BLM and State of Nevada mammals of concern that may occur in the vicinity of the proposed action. The list is based on the Nevada BLM-Information Bulletin No. NV-2003-097 (July 29, 2003) and additional input from NDOW.

**Table B2. Nevada BLM Sensitive Mammals**  
Bruffey Canyon #1-14 Project

COMMON NAME	SCIENTIFIC NAME
Nevada BLM Sensitive Mammal Species	
Pygmy rabbit	<i>Brachylagus idahoensis</i>
Small-footed myotis	<i>Myotis ciliolabrum</i>
Long-eared myotis	<i>Myotis evotis</i>
Long-legged myotis	<i>Myotis volans</i>
Spotted bat	<i>Euderma maculatum</i>
Townsend's big-eared bat	<i>Plecotus townsendii</i>

### Pygmy Rabbits

Pygmy rabbits are a BLM Sensitive Species that were petitioned for listing as threatened or endangered under the Endangered Species Act. On May 20, 2005, the U.S. Fish and Wildlife Service announced a 90-Day Finding in the Federal Register indicating that, "... the petition does not provide substantial information indicating that listing the pygmy rabbit may be warranted." The Finding does not downplay the need to conserve, enhance or protect pygmy rabbit habitat.

Pygmy rabbits are found in a variety of vegetation types that include big sagebrush that are suitable for creating their burrow system. No known formal surveys have been completed on the proposed action area. Pygmy rabbits have been observed on a BLM-administered allotment to the northeast. The site was a stand of basin big sagebrush within an ephemeral drainage surrounded by a crested wheatgrass seeding. The proposed site was visited by BLM specialists on July 11, 2007; no pygmy rabbits or burrows were observed during a cursory search around the perimeter of, and within, the proposed site.

### **Bats**

The juniper woodlands and mountainous terrain east of the area provide bat roost sites. Caves, and any mine shafts or adits associated with past minerals prospecting in the area provide roost sites. Foraging areas are provided on the uplands in the area where use could occur in concert with use on irrigated hay meadows/riparian corridors on adjoining private lands and riparian areas on public lands.

Small-footed myotis -- This species could occur in the area. This species has been observed in the Ruby Mountains east of the area and in a variety of habitats in eastern Nevada, including springs, canyons, coniferous forests (including juniper), and deciduous forests. Roosting occurs primarily in caves or mine shafts or adits which potentially occur east of the area.

Long-eared myotis. -- This species is relatively common throughout northeastern Nevada and could occur in the area. This species is often associated with mid-elevation pinyon pine and Utah juniper woodlands and is dependent upon natural springs within these woodland types as water sources. It has also been reported to be found within a variety of other habitats.

Long-legged myotis -- This species uses a variety of sites for roosting, including trees and could potentially inhabit the area.

Spotted bat. Suitable habitat could occur on the area. Roosting sites include rock crevices on steep cliff faces, which exist on the Sulphur Springs Range.

Townsend's big-eared bat - Records of this species occurring in northeast Nevada exist, therefore there is potential for it to exist on the area. This species generally requires caves for roosting. The availability and suitability of caves near the project area is not known.

### **Nevada BLM Sensitive Birds**

As noted in Table B3, the area provides habitat for Nevada BLM Sensitive Species on a seasonal or yearlong basis, including sage grouse, numerous raptors, vesper sparrow, loggerhead shrike,



black-rosy finch, juniper titmouse, and pinyon jay. The list is based on input from NDOW and the Nevada BLM-Information Bulletin No. NV-2003-097 (July 29, 2003).

**Table B3. Nevada BLM Sensitive Birds**  
Proposed Bruffey Canyon #1-14 Project

COMMON NAME	SCIENTIFIC NAME
Greater Sage Grouse	<i>Centrocercus urophasianus</i>
Bald Eagle	<i>Haliaeetus leucocephalus</i>
Golden Eagle	<i>Aquila chrysaetos</i>
Prairie Falcon	<i>Falco mexicanus</i>
Swainson's Hawk	<i>Buteo swainsoni</i>
Ferruginous Hawk	<i>Buteo regalis</i>
Burrowing Owl	<i>Athene cunicularia</i>
Short-eared Owl	<i>Asio flammeus</i>
Loggerhead Shrike	<i>Lanius ludovicianus</i>
Black-rosy Finch	<i>Leucosticte atrata</i>
Vesper Sparrow	<i>Poocetes gramineus</i>
Juniper Titmouse	<i>Baeolophus griseus</i>
Pinyon Jay	<i>Gymnorhinus cyanocephalus</i>

Sage Grouse - The area is within the Cortez Sage Grouse Population Management Unit (PMU) in Nevada. This PMU is being considered under the Governor's Nevada Sage Grouse Conservation Strategy by the South Central Planning Group as part of sage grouse conservation planning efforts underway for the Elko District. Shrub cover is vital as a forage and cover component for sage grouse. Evaluation of habitat values and the possibilities to improve them are considered on crested wheatgrass seeding areas such as those on the allotment through this conservation effort.

The 1987 Elko RMP (pages 30 and 37) and the 2005 Programmatic Leasing EA (Appendix A), identify the following limitations that may be placed on leasing activities to protect sage grouse:

- No surface occupancy is permitted within 0.5 miles, or other, lesser, appropriate distance based on site-specific conditions, of sage grouse leks. (OG-010-05-07).
- Seasonal restrictions from disturbance in sage grouse brood rearing areas apply within 0.5 miles or other appropriate distance based on site-specific conditions from 5/15 to 8/15, inclusive. This restriction does not apply to operating facilities. (OG-010-05-08)
- Seasonal restrictions from disturbance in sage grouse crucial winter habitat apply during the period November 1 to March 15. This restriction does not apply to operating facilities. (OG-010-05-09)

No sage grouse leks (breeding display sites) are known to occur within two to three miles of the proposed well site. One sage grouse lek has been documented within approximately seven miles southwest of the well site. As per conversation with Steve Foree, NDOW Supervisory Habitat

Biologist, NDOW personnel flushed sage grouse near Sulphur Springs along Union Pass Road during the spring period “a few years” prior to 2004. This might suggest that a lek was within two miles north of the project area prior to 2004. The Sulphur Springs area was checked by aerial flight on April 23, 2004 but no activity was observed.

The lek areas form “core areas” for associated nesting, brood-rearing and winter habitat areas. Otherwise, there could be sage grouse movements into the area from other areas relatively far away as individual or groups of grouse seek seasonal use areas.

The well site potentially provides sage grouse habitat including winter, nesting and early (upland) brood habitat. Overall, similar sagebrush-grassland habitat occurs on bench areas north and south of the project area where any potential use by sage grouse would be dispersed.

### **Raptors**

The entire Elko District may provide suitable nesting and foraging habitat for sensitive raptor species.

Bald Eagle – The bald eagle was delisted as a federally threatened species by the U.S. Fish and Wildlife Service<sup>2</sup> effective August 8, 2007. BLM is coordinating with the Nevada Department of Wildlife (NDOW) to ensure compliance with state regulations regarding the bald eagle, and any status re-designation as a BLM Sensitive Species is pending as of August 8, 2007. Bald eagles may use the area due to its proximity to winter foraging areas. Suitable habitat on uplands, irrigated lands and riparian areas is widely dispersed over tens of thousands of acres throughout the Elko District.

Golden Eagle – The area provides foraging habitat where prey species are primarily small mammals. Black-tailed jackrabbits provide the primary forage base.

Prairie Falcon - The area provides foraging habitat for this species where prey species are primarily small mammals. Black-tailed jackrabbits provide a forage base as mentioned above for golden eagles.

Swainson's Hawk – Deciduous trees such as species of cottonwood on riparian corridors on private lands directly to the north (Bruffy Ranch) and south (Plummer Ranch) provide primary potential nesting habitat. It is unknown if any nesting use occurs and hawks have habituated to the presence of humans. Sagebrush/grass habitat on the area provides foraging habitat during the summer period, and during migration or seasonal movement events.

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<sup>2</sup> On June 28, 2007, the Secretary of the Interior announced that the bald eagle was being removed from the Federal list of threatened and endangered species. The final rule delisting the bald eagle was published in the Federal Register on July 9, 2007, and will become effective on August 8, 2007 (72 FR 37346). After delisting, bald eagles will continue to be protected under the Bald and Golden Eagle Protection Act (BGEPA) and the Migratory Bird Treaty Act. Both of these laws prohibit killing, selling or otherwise harming eagles, their nests, or their eggs. In June, the Service clarified its regulations implementing the BGEPA and published the National Bald Eagle Management Guidelines. The Service is in the process of establishing a permit program under the BGEPA that would authorize limited take of bald and golden eagles consistent with the purpose and goal of the BGEPA. The Service has also prepared a draft post-delisting bald eagle monitoring plan. These documents and more information about the bald eagle are available on the Service's website at <http://www.fws.gov/migratorybirds/baldeagle.htm>.

Ferruginous Hawk – In Nevada, this species prefers to nest in scattered juniper woodlands that are found on the edge of salt desert shrub or sagebrush vegetation types overlooking broad valleys. They could also nest on the top of “tall” sagebrush/other shrubs, rock outcrops, manmade structures or on deciduous trees such as quaking aspen or cottonwoods. Tall sagebrush/other shrubs could be defined as shrubs existing at about six feet in height or higher, out of the reach of potential ground-dwelling predators such as coyotes. Shrubs at this height did not occur on the proposed well site areas. Relative to the area, nesting could occur on juniper trees or on the ground. Otherwise, the allotment provides foraging habitat for ferruginous hawks associated with potential nest sites in juniper cover, and during migration or seasonal movement events. On July 11, 2007, the lower elevation edge of juniper stands were checked from approximately 150 yards east to 500 yards northeast of the proposed well site; no ferruginous hawks or their nests were observed. As of August 2007, as concurred by NDOW, there are no documented nest sites on or within several miles of the proposed action. Black-tailed jackrabbits provide a forage base as mentioned above for golden eagles.

Burrowing Owl - This species could occur on the area. Abandoned mammal burrows, such as those created by badgers, help to provide nesting habitat. This species tends to use disturbed or open sites with minimal vegetation for nesting and loafing, such as recent burned areas or areas near troughs, corrals, or livestock mineral licks where open terrain exists. This may be due to the lack of vegetation at these sites that allows increased visibility from the burrow entrance. Improving or maintaining range conditions and riparian areas would improve conditions for the prey species on which this owl depends. No burrowing owls or evidence of their nest sites were observed on July 11, 2007, during a cursory search around the perimeter of, and within, the proposed site. BLM and NDOW records do not indicate any nest sites within a 0.5 mile radius around the proposed well site.

Short-Eared Owl - The area provides nesting and foraging habitat for this ground-nesting species. This species has been observed foraging on a crested wheatgrass seeding with a sagebrush component on the Elko District. Nests with young have also been documented on mine sites under consideration for reclamation with no appreciable perennial vegetation. No short-eared owls or their nests were observed on July 11, 2007 during a cursory search around the perimeter of, and within, the proposed site. BLM and NDOW records do not indicate any nest sites within a 0.5 mile radius around the proposed well site.

Limitations that may be placed on leasing activities to protect nesting raptors are identified by the 1987 Elko RMP (page 25) and the 2005 Programmatic Leasing EA (Appendix A; Stipulation No. OG-010-05-02). The restrictions apply up to a 0.5 mile radius around the active nesting sites of the following species during the inclusive period described below.

- a) Golden Eagles and Great Horned Owls during the period 1/1-6/30.
- b) Long-eared Owls during the period 2/1-5/15.
- c) Prairie Falcons during the period 3/1-6/30.
- d) Ferruginous Hawks, Northern Harriers and Barn Owls during the period 3/1-7/31.
- e) Goshawk and Sharp-shinned Hawks during the period 3/15-7/15.
- f) Cooper’s Hawks, Kestrels, and Burrowing Owls during the period 4/1-6/30.

- g) Red-tailed and Swainson's Hawk during the period 4/1-7/15.
- h) Short-eared Owls during the period 2/1-6/15.

### **Other Sensitive Avian Species**

Vesper Sparrow – This species is a ground-nester. Relative to the area, it is associated with sagebrush grasslands. The area provides potential nesting and foraging habitat.

Loggerhead Shrike – Potential nesting habitat is provided on the area primarily by basin and Wyoming big sagebrush. Foraging habitat is provided on sagebrush-grass areas with variable canopy cover of brush species. No nests or shrike were observed on July 11, 2007, during a cursory search around the perimeter of, and within, the proposed site.

Black-rosy Finch – The area provides suitable winter habitat on sagebrush grasslands.

Juniper Titmouse – The area provides suitable habitat on Utah juniper woodlands sites where access roads would be used.

Pinyon Jay – Juniper woodlands provide habitat for pinyon jays. No pinyon jays were observed or heard on July 11, 2007.

### **Effects on Nevada BLM Sensitive Birds and Mammals**

Overall, the effects of the proposed action would be the same as those described above for wildlife. The proposed action could occur within the sensitive species birthing/nesting and young-rearing period. The sensitive birds and mammals are mobile and would likely avoid the sites while operations are in progress.

The exception might be if a pygmy rabbit burrow is destroyed during drilling operations with active use within the burrow. No pygmy rabbits or their burrows were observed during a cursory check on the proposed drill site. Overall, the proposed project would occur within potential pygmy rabbit habitat over thousands of adjoining acres. The drilling of the exploration the proposed well, and if successful, production of the oil or gas resource, would not affect pygmy rabbit populations in the area.

As noted on page 15, BLM may place seasonal restrictions on activities in areas containing suitable raptor nesting habitat to avoid displacement and mortality of raptor young that would typically apply to a 0.5 mile radius around active nesting sites and vary from January 1 to July 31, depending on the species. Road construction and drilling operations are not currently planned before August 1, so the proposed activities are not expected to impact nesting raptors. If the schedule changes, then it is a standard operating procedure to require an inventory for active nests prior to disturbance of vegetation (1987 Elko RMP, page 25).

Surface use associated with drilling the exploration well is not proposed to occur in the winter months. Limited activity that would occur if oil is found and the well is put in production. BLM has determined the proposed action would not affect the bald eagle.

Successfully reclaimed areas could provide forage diversity and new foraging areas for Special Status Species, and in the case of predatory species such as raptors, their prey. There is the potential for depredation of seedlings by livestock (if the area is not fenced) and wildlife, primarily by jackrabbits.

If well production occurs, there would be a long-term loss of habitat and possible avoidance of an undetermined area around the well site when workers are in the area or active use of equipment/machinery occurs. Some of the sensitive species would habituate to the structures and people on site and continue to utilize habitat either on, or relatively close to, the site.

### **3.2.9 Migratory Birds**

A migratory bird is a bird that has a seasonal and somewhat predictable pattern of movement. Generally this includes all native birds in the U.S, except those non-migratory species such as quail and turkey that are managed by states.<sup>3</sup> Under the provisions of the Migratory Bird Treaty Act, the unauthorized take (death or injury) of migratory birds is a strict liability criminal offense that does not require knowledge or specific intent on the part of the offender. The U.S. Fish and Wildlife Service are responsible for issuing a permit to allow take of a migratory bird.

The proposed action area is characterized by the basin big sagebrush and Utah juniper woodland vegetation types that provide foraging areas and cover diversity for migratory birds. Table C lists the migratory bird species from the Nevada Partners in Flight Bird Conservation Plan<sup>4</sup> that are a priority for management and are associated with the sage brush and juniper habitat types.

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<sup>3</sup> On January 11, 2001, President Clinton signed an Executive Order for the Conservation of Migratory Birds. This executive order outlines the responsibilities of Federal agencies to protect migratory birds and directs executive departments and agencies to take certain actions to further implement the Migratory Bird Treaty Act (MBTA). Under the MBTA, it is unlawful “by any means to take, capture [or] kill” migratory birds except as permitted by regulations issued by the U.S. Fish and Wildlife Service. The Service has defined by regulation that ‘take’ means to “pursue, hunt, shoot, would, kill trap, capture or collect” any migratory bird or any part, nest or egg of any migratory bird covered by the [MBTA] conventions, or to attempt those activities. The unauthorized take (death or injury) of migratory birds is a strict liability criminal offense that does not require knowledge or specific intent on the part of the offender. Even when an activity for which there is no existing permit results in the take of a migratory bird, violations can occur if bird death or injury results. (U.S. Fish and Wildlife Service, Division of Migratory Birds, Questions and Answers)

<sup>4</sup> References to ‘species of concern’ in the 2001 Executive Order pertain to those migratory bird species listed in 50 CFR 17.11, and in established plans such as for Partners in Flight physiographic areas.

**Table C - Migratory Birds by Habitat Type\***

<b>Sagebrush</b>	<b>Pinyon/Juniper**</b>
<u>Obligates***</u> <b>Sage Grouse</b>  <u>Other****</u> <b>Black Rosy Finch</b> <b>Ferruginous Hawk</b> Gray Flycatcher <b>Loggerhead Shrike</b> <b>Vesper Sparrow</b> <b>Prairie Falcon</b> Sage Sparrow Sage Thrasher <b>Swainson's Hawk</b> <b>Burrowing Owl</b> Calliope Hummingbird  <u>Other Associated Species</u> Brewer's Sparrow Western Meadowlark Black-throated Sparrow Lark Sparrow Green-tailed Towhee Brewer's Blackbird Horned Lark	<u>Obligates</u> <b>Pinyon Jay</b> Gray Vireo  <u>Other</u> <b>Ferruginous Hawk</b> Gray Flycatcher <b>Juniper Titmouse</b> Mountain Bluebird Western Bluebird Virginia's Warbler Black-throated Gray Warbler Scott's Oriole  <u>Other Associated Species</u> Mountain Quail Scrub Jay Black-billed Magpie Clark's Nutcracker Mountain Chickadee
<p>* Species shown may not necessarily inhabit the proposed project area due to factors including, but not limited to, site-specific habitat needs versus those habitats provided on the same area.</p> <p>** There are no pinyon pine trees on the proposed project area</p> <p>*** "<i>Obligates</i>" are species that are found only in the habitat type (the habitat is needed during life cycle even though a significant portion of their life cycle is supported by other habitat types).</p> <p>**** "<i>Other</i>" species can be found in the habitat type as described the Nevada Partners in Flight Bird Conservation Plan.</p>	

## **Effects**

Note that the above list includes some birds that are discussed in the previous section for BLM Sensitive Species, which are shown in **bold** type in the table. This includes sage grouse, which is an obligate species for the sagebrush vegetation type that dominates the proposed well site. The effects of the proposed action on migratory birds would be the similar to those discussed in the previous section for sensitive avian species. Construction is not proposed during the nesting or brood-rearing season (approximately April 1 - July 31). If rescheduled, then destruction of eggs or mortality of young birds could be avoided if a survey for active nests is completed for migratory birds as well as raptors.

### **3.2.9 Visual Resources**

The proposed action is located within a Class IV Visual Resources Management (VRM) area. Objectives for this VRM class are to partially retain the existing character of the landscape. Management activities in Class IV areas may contain contrasts which attract attention but not dominate the view of the casual observer. Changes should repeat the basic elements of form, line, texture and color found in the predominant natural features of the characteristic landscape.

This area can be described as a shale green rolling landscape broken by the shapes of the horizontal/vertical fence posts and linear two track access road. Pale green sagebrush/grass vegetation sparsely covers the landscape. Clumps of Juniper green trees are on the ridges to the

north and east of the project. Soil colors along the roadway are tan. Man-made features within a mile of this project include barb wire fences. A gold exploration drill rig and man camp, several corral and ranch building site are located approximately one and one quarter mile of the project, however, except for the gold exploration equipment, none of these are visible from the project site due to the topographic and vegetation screens.

### **Effects**

No lights are proposed to be on the facilities at night. The proposed action would introduce additional linear features. The linear features introduced by the well site access road and fences would create weak contrasts with the natural landscape. Color contrasts would be moderate with the exposure of the tan soils. Should production be established, the pumpjack would introduce an angular form which would contrast with the rolling topography. Using the VRM Best Management Practices of painting the pumpjack shale green (Munsell Soil Color No. 5Y 4/2) as described in the proposed action would reduce the color contrasts with the surrounding vegetation. If production is established, these changes to the landscape would remain for a period of up to 50 years. Successful reclamation of the well site and access road would meet Class IV Visual Resources Management objectives.

### **3.2.10 Vegetation, including Invasive Non-Native Species**

Species found on the drill pad site, along the access road and at the gravel pit include crested wheatgrass in the range seeding, native sagebrush, rubber rabbitbrush and Great Basin wildrye. Invasive species in the area include annual cheatgrass.

No noxious weeds have been documented or were found during the on-site visit at the site or along the access road, but there is a potential for noxious weeds to occur.

### **Effects**

This exploration project would disturb approximately 3 acres of vegetation. If production is established, the drill pad and access road would remain disturbed and 3.0 acres of vegetation would be removed and not revegetated until the oil/gas resources are depleted and the well plugged and abandoned. If oil production is not established, the pad area along with the new access road would be reclaimed and reseeded. Fencing of reseeded areas and seeding in the fall would have the most likelihood of being successful.

Blading during road construction operations could introduce weeds into the disturbed areas. This risk would be reduced by having construction equipment washed prior to road construction

### **3.3 Cumulative Impacts**

Past geophysical exploration projects have occurred in the Pine Valley area. Past and present actions within the Bruffey grazing allotment include seeding and fencing projects. Use of material sites for gravel has occurred in the past, and is expected to continue during the life of this project, which would extend until areas disturbed by the exploration and any production phase are successfully reclaimed.

Early season grazing of the area occurs, and continued grazing of the allotment is foreseeable. Riparian areas are in good condition, and are expected to filter sediment contributions to tributary drainage to Pine Creek during runoff events following construction of the access road and well pad.

Since 1952 there have been 4 exploration oil/gas wells drilled within one mile of the proposed well. Three shallow ( $\pm 1800'$ ) wells were drilled in 1952 and 1953 by the Eureka Oil and Gas Syndicate or by Eureka Drilling. The most recent well was drilled by True Oil Company in 1991. All four wells were dry. These exploration wells disturbed approximately eight acres of the surface over that time. Well pads from the 1950s have naturally re vegetated with vegetation variety and density similar to the surrounding area. The True Oil Company well pad was successfully reclaimed with vegetation similar to the surrounding area. BLM concludes that cumulative impacts would be negligible as a result of the proposed action.

### **3.4 Mitigation and Monitoring**

Cleary Petroleum Corporation holds the oil and gas lease (NVN-04060009), and the application is for drilling the Bruffey Canyon Fed. 1-14 well and for construction of an access road. The area has been leased subject to standard lease terms, and with the special stipulation for sage grouse. Section 6 of the standard federal oil and gas lease (Form 3100-11) provides the BLM with authority to require reasonable measures to minimize adverse impacts to cultural and natural resources, consistent with lease rights granted. As a result of the analysis in this EA, the Elko Field Office recommends the following mitigation and monitoring measures be required as a condition of approving the APD.

### **Cultural Resources and Tribal Coordination and Consultation**

Because no cultural resources were found during the inventory, the proposed Cleary oil well pad will have no effect to historic properties. Although no sites were identified as a result of inventory and site visits, the approval of the APD should provide notice of the following requirements for all operations of this project (OG-010-05-03):

If historic properties and/or resources protected under the National Historic Preservation Act (NHPA), American Indian Religious Freedom Act, Native American Graves Protection and Repatriation Act, E. O. 13007 [Sacred Sites], or other statutes and executive orders, the BLM will not approve any ground disturbing activities that may affect any such properties or resource until it completes its obligation under applicable requirements of NHPA and other authorities. The BLM may require modifications to exploration or development proposals to protect such properties, or disapprove any activity that is likely to result in adverse effects that cannot be successfully avoided, minimized or mitigated.

During the project activities, if any cultural properties, items, or artifacts (stone tools, projectile points, etc...) not previously recorded by BLM are encountered, it must be stressed to those involved in Oil Well Exploration that such items are not to be collected and that the BLM, Elko Field Office must be notified of the discovery. Cultural and archaeological resources are protected under the Archaeological Resources Protection Act and the Federal Land Management Policy Act. Also, though the possibility of disturbing Native American gravesites within the



project area is extremely low, inadvertent discovery procedures must be noted. Under the Native American Graves Protection and Repatriation Act, section (3) (d) (1), it states that the discovering individual must notify the land manager in writing of such a discovery. If the discovery occurs in connection with an authorized use, the activity, which caused the discovery, is to cease and the materials are to be protected until the land manager can respond to the situation.

### **Water Resources, Wetlands and Riparian Areas**

As discussed on page 9, the Energy Act of 2005 amended sections of the Clean Water Act to exempt oil and gas exploration and development activities from requirements for a National Pollution Discharge Elimination System (NPDES) permit. Implementation of Best Management Practices (BMPs) would minimize soil lost from the site. Installation of sediment filters such as straw waddles at key locations below the drill pad would prevent sediment from entering the surface water. Waddles placed across areas where water is likely to concentrate including trails, roads, disturbed areas and headwaters of gully channels will reduce flow velocities and opportunities for sediment transport to wetland and riparian vegetation along Pine Creek.

### **Wildlife**

Sage Grouse - No leks occur within 0.5 miles of the proposed well (OG-010-05-07). The area is not in crucial winter habitat for sage grouse (OG-010-05-09). However, brood-rearing may occur in habitat near the access road or well pad site. Approval of the surface use plan, including construction of the access road and drilling of the well, should be conditioned upon the following:

- Seasonal restrictions from disturbance in sage grouse brood-rearing areas apply within 0.5 miles or other appropriate distance based on site-specific conditions from 5/15 to 8/15, inclusive. This restriction does not apply to operating facilities. (OG-010-05-08)

Raptor Nests – As noted on page 14 of the EA, active raptor nesting sites are subject to seasonal protection from disturbance to avoid displacement and mortality of raptor young (OG-010-05-01). Restrictions apply up to a 0.5 mile radius around the active nesting sites of the following species during the period described below.

- a) Golden Eagles and Great Horned Owls during the period 1/1-6/30.
- b) Long-eared Owls during the period 2/1-5/15.
- c) Prairie Falcons during the period 3/1-6/30.
- d) Ferruginous Hawks, Northern Harriers and Barn Owls during the period 3/1-7/31.
- e) Goshawk and Sharp-shinned Hawks during the period 3/15-7/15.
- f) Cooper's Hawks, Kestrels, and Burrowing Owls during the period 4/1-6/30.
- g) Red-tailed and Swainson's Hawk during the period 4/1-7/15.
- h) Short-eared Owls during the period 2/1-6/15.

Disturbance is planned after August, outside of the period preceding nesting activity by raptors and after young have fledged. If construction of the access road or well site is scheduled during the raptor nesting period as listed by OG-010-05-01 (generally January 1 through July 31), then the operator should employ a qualified biologist to inventory the areas prior to disturbance for active nests (1987 Elko RMP Record of Decision; p. 25). Any nesting activity should be reported to the BLM Field Manager for a determination of appropriate mitigation measures.

Other Species of Concern -- In addition to nesting raptors, the above biological survey should report any observations of other wildlife species of concern, including sage grouse, pygmy rabbits and migratory birds listed in Table C of this EA (page 18). The nesting season for migratory birds is generally April 1 – July 31. Any take of a migratory bird must be avoided.

#### **Vegetation/Noxious Weeds**

Blading during road construction operations could spread noxious weeds into the disturbed areas. Washing the construction equipment prior to road construction would reduce the chances of spreading noxious weeds.

The BLM approved reclamation seed mixture (EA, page 7) should be sown during the fall or early winter season, immediately following the seedbed preparation. Following seeding, a fence meeting BLM specifications should be constructed around the drill pad area. This fence should remain in place for a period of three growing seasons to promote successful revegetation of the disturbed area. The fence would be removed following BLM determination that the reclamation is successful.

### **4. CONSULTATION and COORDINATION**

#### **4.1 List of Preparers**

Jim Lindsay - Lead Preparer, Geology and Minerals  
Bryan Hockett - Cultural Resources  
Gerald Dixon - Native American Coordination  
Tamara Hawthorne - Recreation/Wilderness/VRM  
Cathie Jensen – Lands and Realty  
Mark Dean - Soil, Water and Air Resources  
Janice Willard, Rangeland Management  
Ken Wilkinson - Terrestrial Wildlife  
Lorrie West - Environmental Coordination and Planning

#### **4.2 Persons, Groups or Agencies Consulted**

Rory Lamp, Nevada Department of Wildlife.  
Pete Bradley, Nevada Department of Wildlife  
Mike Podborny, Nevada Department of Wildlife  
Steve Foree, Nevada Department of Wildlife  
Chad Mellison, U.S. Fish and Wildlife Service  
D. L. Zerga and Associates, Archaeological Consultants  
Jake Typo, Environmental Coordinator, South Fork Band of Western Shoshone

#### **Attachments**

Well Site Photos

Figures (from the APD)

Map A – Vicinity Map

Map B – Project Map

Plan View of Pit and Pad Layout, Drilling Rig Layout

Map A

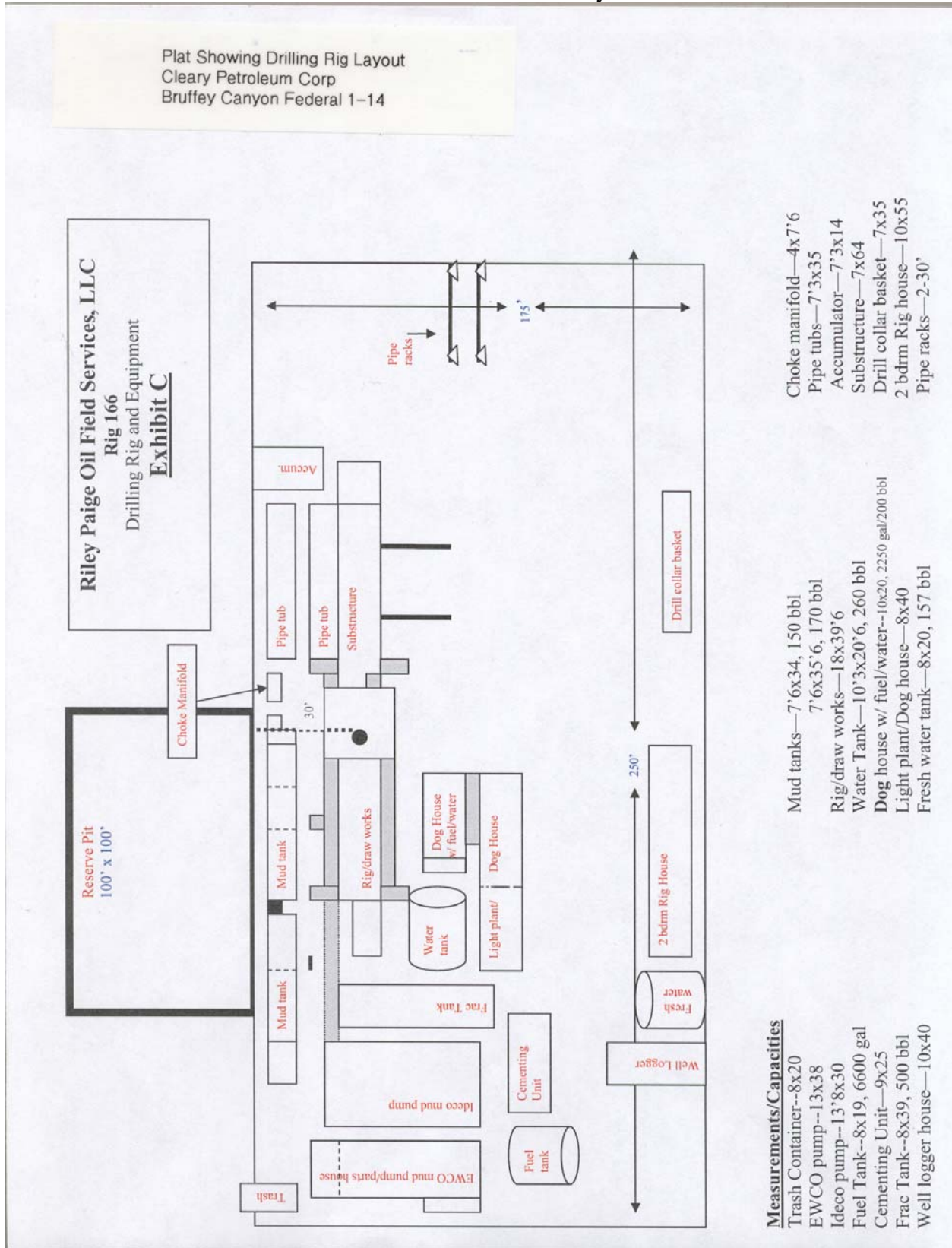




Map B



## Plan View of Pit and Pad Layout







**Figure 1**Photos of the Bruffey Canyon, Federal 1-14 Well Site (BLM, April 17, 2007)



**Figure 2** View to the southeast across the project area



**Figure 3 View to the east down the existing access road**



**Figure 4 View north across the project area**





**Figure 5 Pine Valley Community Pit**